QUALITY ASSURANCE PROGRAM
FOR THE
ODESSA FIRE DEPARTMENT

EXECUTIVE LEADERSHIP

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Appendices G and H Not Included. Please visit the Learning Resource Center on the Web at http://www.lrc.dhs.gov/ to learn how to obtain this report in its entirety through Interlibrary Loan.

ABSTRACT

The purpose of this research was to determine to what degree would a quality assurance (QA) program benefit the Odessa (TX) Fire Department (OFD). The problem was that the OFD could not identify the strengths and weaknesses of the department because of not having a formal method of evaluating the services provided. This research helped to determine the value and provided necessary elements to develop the program. The study also revealed benefits gained by fire departments with actual QA programs in place. Agencies outside of the fire service were studied to evaluate the success and structure of QA programs. The descriptive and action method of research was used to determine if a QA program would be of benefit to the OFD. The answers to four research questions helped to make an informed decision on the feasibility of an OFD quality assurance program and resulted in a program being established. 1) What is a fire quality assurance program? 2) What components are evaluated by a quality assurance program by other fire departments? 3) What are the benefits of a quality assurance program for the Odessa Fire Department? 4) If the Odessa Fire Department implements a quality assurance program, how should the program be structured?

In summarizing this study, this researcher followed the procedure of conducting two separate surveys to determine the interest of the fire service, what types of QA programs exists, what elements are evaluated, the program structure, and what benefits could be realized. A literature review was also conducted with agencies with existing programs to gather pertinent information. The survey and literature review results revealed enough benefits to establish a QA program for the OFD, as well as the necessary information to understand how it should be structured. This researcher recommends this type of program to help identify the strengths and weaknesses of the fire service, and to help to consistently provide a quality service.

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INTRODUCTION

The problem was that the OFD could not identify the strengths and weaknesses of the department because of not having a formal method of evaluating the services provided. The purpose of this research was to determine to what degree would a quality assurance program benefit the Odessa Fire Department. To develop a plan, four research questions were considered:

1) What is a fire quality assurance program?
2) What components are evaluated by a quality assurance program by other fire departments?
3) What are the benefits of a quality assurance program for the Odessa Fire Department?
4) If the Odessa Fire Department implements a quality assurance program, how should the program be structured?

The descriptive and action research methods were used to answer these questions, and ultimately resulted in a plan for implementing a QA program being implemented for the OFD.

The OFD has a coverage area of 904 square miles, and provides fire and Emergency Medical Service (EMS) service for a population of approximately 125,000 within the City of Odessa and Ector County with 8 stations and 153 shift personnel. Odessa is located on Interstate 20 in west Texas, halfway between Dallas and El Paso.

The interest in a fire service QA program came from this researchers participation in the Executive Leadership class at the National Fire Academy (NFA). The class stressed the need for the fire service to evaluate services provided and to promote quality through effective leadership with techniques illustrated in the class. Networking with other fire service professionals gave this

researcher the idea to research and possibly establish a QA program to better evaluate the ability of the OFD to provide services.

BACKGROUND AND SIGNIFICANCE

The Odessa (TX) Fire Department, established in 1923, began as a small, seven member, volunteer department, and quickly grew to our current status of 153 paid, shift personnel, with 8 stations. The OFD began providing EMS in 1973. Haz-mat and technical rescue teams, fire inspections, and public education/prevention programs are also provided.

In 2001, the OFD responded to 10,501 total incidents. The EMS responses accounted for 72.5% of the total number. The responses consisted of 7,614 EMS, 921 fire, and 1,966 miscellaneous runs. Since a total reorganization of the department in 1996, the OFD has evaluated and changed many things. The department is constantly in search of new and better methods of delivering emergency services as well as alternative funding sources. Many ideas of change were as a result of members of the OFD management team participating in the Executive Fire Officers Program (EFOP) at the NFA. Networking with other departments, applied research projects, and the willingness to change resulted in many innovative ideas being implemented. The idea of this research to evaluate and possibly implement a quality assurance program came from the networking experience of the NFA and this researcher attending the Executive Leadership class.

The City of Odessa is located in the middle of the oil industry with several manufacturing plants and chemical companies. With this added danger of providing fire protection and EMS to the community, the OFD must develop a formal process to evaluate the ability of the department to safely meet these needs and insure a quality service is continually provided and monitored.

Community leaders and the general public expect the OFD to be an effective, efficient, and innovative organization. In the past, the reorganization of the department in 1996 helped to achieve this expectation, but a continuous process of evaluation and improvement is needed. Ideas for improving the department continue to be encouraged with this administration. The problem faced by the OFD was not having a formal, structured method of evaluating services provided. This research afforded the department with an opportunity to evaluate the benefits of a QA program and possibly implement a program.

The Executive Leadership class attended by this researcher at the NFA was instrumental in providing the topic for this research. The course focused on effective leadership for the fire service. The leadership and goal setting information and techniques discussed by the instructors, provided a helpful guide for developing a plan for establishing a QA program for the OFD, and will no doubt promote success of this and future programs.

From past experience, the OFD can become too comfortable and fall into a rut of doing business as usual, with a “if it’s not broke, don’t fix it” type mentality if the opportunity for change is not available or encouraged. A quality assurance program can provide this opportunity to improve and give direction to the department’s training efforts.

The present situation of the OFD is a plan for implementing a QA program established to have a structured process to promote positive change within the organization.

The future objectives for the OFD will be to implement the program and to invite representatives from other fire departments to provide an unbiased opinion of the ability for the OFD to provide a safe, efficient, quality service. Hopefully, this peer review will help promote positive change with not only the OFD, but also with the other participating departments. In the near future, the OFD plans to seek international accreditation.

LITERATURE REVIEW

In researching the feasibility and benefits of a quality assurance programs (QA) for the Odessa (TX) Fire Department, a study was conducted of organizations with a history of such a program. A literature review and two surveys of various fire departments were conducted in an effort to examine the QA programs from different perspectives and experiences. Fire departments across the nation were surveyed to determine how common is the practice, and what benefits, if any, exists.

An important first step of this research was to determine the definition of a QA program. In a publication of the U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA) (1997), defines a quality assurance program as a retrospective review or inspection of services or processes that is intended to identify problems. Another process to evaluate a service and promote quality, a quality improvement program, was discovered and defined as a continuous study and improvement of a process, system or organization.

In generic terms according to Powers (1992), “quality implies a high level of excellence with respect to a characteristic, trait, service or product”. Powers also stated that quality is a dynamic process and the goal is to meet established standards and ultimately, elevate the standards or expectations to a higher level. In the same article, co-author, Taigman (1992), states,

> I know quality when I see it, and I bet you do too. You know about the quality of products and services you receive, and so do our customers. But it’s almost impossible to come up with a good definition of quality; I know what quality means to me, and you probably know what it means to you. Almost everyone has his own opinion. That’s why it’s awfully hard to come up with a definition that works for everyone.

> But if we can't define quality, then how can we insure it? That's why I think the term quality assurance is somewhat of an oxymoron (you know, like fresh, frozen, jumbo shrimp or civil war). Quality is defined in a person's mind based on his perception of it. Therefore, quality is determined when your perception matches your expectation. Taigman (1992, p. 67)

The conclusion of the article by Powers and Taigman was to achieve a high level of quality, is to blend both the QA concept with that of the quality improvement process.

Eastman and Walz (1992), wrote about total quality management (TQM) and defined the program as one that focuses on designing and improving the process of how we do things so that mistakes are prevented. TQM has the philosophy that quality is a team effort and everyone has a place on the team.

The next step in considering a QA/QI program for the OFD was to determine the value of establishing such a program. A study of the customer service management protocol M.P. 201.00, written by the Phoenix (AZ) Fire Department (2001), listed benefits of focusing on quality as;

> The organization benefits of providing exceptional customer service, with added value, are numerous. Benefits include:
>
> - Builds positive relationships and trust within our fire department
> - Builds positive relationships and trust in our community
> - Secures and maintains adequate resources and benefits
> - Happy customers, bosses, workers.
> - Positive job satisfaction
> - Places us in the best position to compete
> - It's fun to be nice and do nice things

- Doing it right eliminates bad press, liability, and extra paperwork
- It saves lives and property – that's important to our customers
- It's the right thing to do (Phoenix Fire Department, 2001 p.3)

Brenner (1998) wrote in an applied research paper for the Executive Fire Officer Program (EFOP) of the National Fire Academy that the fire service of today is expected to provide more for less. Brenner wrote with this expectation, a valuable tool called Service Quality is going to be helpful in identifying quality deficiencies to improve a fire department. Brenner also wrote that the organization should consider the implementation of a Quality Service Program and recommended the following steps:

1. Before implementation, everyone in the organization should be trained in Service Quality.
2. If your employees belong to an association or labor union, collaborate with that alliance so that they fully understand how this will improve the organization.
3. Conduct the quality deficiency survey a minimum of once a year.
4. If you are going to survey a large group of people, try to break them into small divisions with no more than fifty individuals in one division. (Brenner, 1998, p.ii–iii)

Quality deficiencies anywhere in an organization can have a negative impact on its work products and/or services. For this reason, the management of an organization needs to create and maintain a process in which quality deficiencies are identified and addressed so that continuous improvement will always be the standard. (Brenner, 1998, p.18)

In another EFOP applied research paper, Dean (1992) agreed with Brenner and wrote, "As the competition for the diminishing tax dollars intensifies, the executive fire officer must

look beyond the “usual” way of doing business. Today’s customers, consumers, or taxpayers are more shrewd and sophisticated and they demand a quality product or service in return for their dollar”. (Dean, 1992, p. ii)

In Dean’s research was a quote from the article “Measuring Excellence” by Burton A. Clark, Chief Fire Executive, (June, 1986) which stated; “There are three groups that determine the standards of effectiveness and efficiency for the fire service. The general public, the government, and the fire service itself…. So how do chief fire executives find out what the citizens want for their money and whether they think they’re getting it? Without being too simplistic—you ask them”. Dean wrote that public opinion surveys could provide the data to identify possible changes and indicate if the people are pleased with the services, and if the services provided are wanted, or simply what the department believes the public wants.

To assist with this evaluation, Timmins, (1985) provides a “mnemonic device” to help visualize the total process of evaluating programs:

Evaluation

Evaluation results must be documented (track the project, accumulate records and statistics, and prove the actual outcomes).

Values (goals) enunciated at the beginning of the program must be assessed and described: Were they valid with proper objectives and purposes?

Accomplishment in closing the gap between “what is” and “what ought to be” should be carefully assessed. Did we actually accomplish what we set out to do? How well?

Leadership of the project should be assessed and evaluated. Did the people in charge have a positive impact? Did they make a positive difference?

Unforeseen events or incidents should be recognized. Evaluators should acknowledge circumstances that arose which weren't or couldn't be anticipated and that reasonably did not have affected outcomes.

Assessment of the measuring tools themselves should be part of evaluation. For instance, were the survey instruments and survey methodologies sound? Was the sample random? Was the questionnaire properly pilot tested?

Test the validity of the results (outcomes) against known standards of performance or standards of accomplishments (be sure outcomes are valid and meaningful).

Include recommendations for future action. What have we learned from the results to date? How valuable are the results? How significant? Are there suggestions for the next time? For others? What changes should be made?

Organizational behavior should be noted and analyzed. Did organizational behavior change as a result of the program? If no behavior changed, one must question the worth of any efforts.

Norms and values of the particular organization should be-must be-incorporated into the fire department program. The evaluation must acknowledge these unique and individualistic factors. (Timmins, 1985, pp. 4 - 5)

The research of Dean also established sufficient evidence to support instituting a customer feedback system into the fire service, yet revealed that very few organizations have actually implemented such a program. Dean recommended:

Based on the research conducted, the author believes that there is sufficient reason to believe that a quality assurance program is not only warranted but also necessary for the fire service. Such a program should be easy to establish and manage. Departments should

> be encouraged to establish these programs. Customer surveys that use a combination of both close ended as well as open-ended questions provide the most flexibility. The close-ended questions provide feedback that lends itself well to statistical analysis and the open-ended questions provide an opportunity for the responder to offer comments or suggestions in their own words. There is minimal investment and the potential for gains in public awareness and public relations are limitless. (Dean, 1992, p. 14)

Eastman and Walz (1992) wrote about another process, total quality management (TQM), which was reported to be replacing older forms of QA programs. TQM, a proactive program, focuses on designing and improving the process of how things are done in an effort to prevent mistakes. TQM operates under the principle that finding mistakes by inspection of an event is too late – the damage has been done.

The TQM concept views the citizens of a community as customers of the fire service, and as professionals, the emergency services should strive to offer the best quality to the customers because of an ethical responsibility. According to quality consultant, Joseph Juran, there are three steps for managing for quality: quality planning, quality control, and quality improvement.

Quality planning involves determining who needs the service, and what services are expected. The goal of quality planning is to develop a system that meets the needs of the external customers (citizens) and the internal customers (employees). Quality control is comparing the services provided to the department's performance standards, and acting on the differences. Maintaining control and improving the standards is an important principle of quality control. The third step, quality improvement, encourages members of the department through empowerment to participate in every aspect of the operations to reach new levels of excellence. This type of

employee involvement has proven to encourage participation more, absenteeism drops, turnovers decline, waste is reduced and organizations save money.

Since a QA program may identify a department's weaknesses that may be considered training issues, an article by Walker (1994) was reviewed and included. Walker wrote about the following core values and concepts of TQM.

1) Quality should be defined by a training division's customers, namely, fire department personnel.
2) All division operations and activities should focus on continuous improvement.
3) Problems and waste should be prevented by building quality into the training division's products, services, and processes.
4) Successfully meeting quality and performance objectives depends on workforce involvement.
5) The training division chief must create customer orientation, clear and visible quality values, and high expectations. Reinforcement of values and expectations requires substantial personal commitment.
6) Associates (training division staff and fire department personnel) should be valued and recognized for their involvement and accomplishments.
7) Management decisions should be based on reliable information, data, and analysis.
8) Long-term commitments should be made to customers, associates, and suppliers.
9) Public responsibilities should be fulfilled.
10) To better accomplish overall goals, partnerships should be built with other agencies and the private sector. (Walker, 1994)

Walker also suggested eight general areas that a department's training division can help

build an integrated quality management system.

- Management and leadership – creating and sustaining a clear, visible quality ideal that reflects a commitment to public health, safety, environmental protection and ethical conduct requires the support of management.
- Strategic quality planning – The training division should develop operational (one-two year) and strategic (three-five year) goals for quality improvement that relate directly to it's mission and quality values.
- Customer focus – The idea behind becoming customer-focused is to improve overall customer service through greater knowledge of the customer, better responsiveness, and the ability to meet requirements and expectations.
- Training and recognition – All training division staff should be trained themselves in support of the division's ideals for quality improvement.
- Associate empowerment – Finding ways to promote an environment that supports associate contributions, teamwork, trust, and respect will help personnel maintain and improve quality.
- Measurement and analysis – An information-management system is necessary to measure the effectiveness of the division's quality-improvement plan.
- Quality Assurance – The main goal of quality assurance is to emphasize prevention rather than detection of problems for all processes and inputs used in the training division.
- Quality and productivity improvement results – Using all the data gathered in the above approaches, the division should be able to produce exceptional measurable results of the quality-improvement effort within three years. (Walker, 1994)

In a publication by the National Highway Traffic Safety Administration (NHTSA) (1996), A Leadership Guide to Quality Improvement for the Emergency Medical Services System, introduces the Malcolm Baldrige Quality Program. The program was extended to include the health care industry in 1994, but could easily be adapted to the fire service of today. The Baldrige Program identifies the following seven key action areas or categories for EMS, which could also apply to the fire service.

- **Leadership** involves efforts by senior leadership and management leading by example to integrate quality improvement into the strategic planning process and throughout the entire organization and to promote quality values and QI techniques in work practices.
- **Information & Analysis** concerns managing and using the data needed for effective QI. Since quality improvement is based on management by fact, information and analyses are critical to QI success.
- **Strategic Quality Planning** involves three major components: 1) developing long and short term organizational objectives for structural, performance and outcome quality standards; 2) identifying ways to achieve those objectives, and 3) measuring the effectiveness of the system in achieving quality standards.
- **Human Resource Development and Management** involves working to develop the full potential of the EMS (fire) workforce. This effort is guided by the principle that the entire EMS (fire) workforce is motivated to achieve new levels of service and value.
- **EMS (fire) Process Management** concerns the creation and maintenance of high quality services. Within the context of quality improvement, process management

refers to the improvement of work activities and workflow across functional or department boundaries.

- **EMS (fire) System Results** entails assessing the quality results achieved and examining the organization's success at achieving quality improvement.
- **Satisfaction of Patients and Other Stakeholders** involves ensuring ongoing satisfaction by those internal and external to the EMS (fire) system with the services provided. (NHTSA, 1997, P. 6)

In reviewing a customer service protocol by the Phoenix (AZ) Fire Department (PFD) (2001), the manner in which the members of the department were empowered to promote quality customer service was discovered. Empowerment, according to the PFD, means the organization delegates official authority and trusts members with the power to provide customer service to the level of the member's abilities and imagination. Since employee empowerment has been mentioned as important to providing a quality service, the PFD guideline has been included. The employee is empowered to perform exceptional, added value, customer service, and instructed to ask:

- Is it the right thing for the customer?
- Is it the right thing for the department?
- Is it legal?
- Is it safe?
- Is it on your organizational level?
- Is it something you are willing to be accountable for?
- Is it consistent with our department's values and policies?

> If the answer to these questions is "yes," then don't ask permission – you are empowered by the organization to "JUST DO IT!" (Phoenix Fire Department, 2001, p. 3)

The philosophy of the PFD to help provide a quality service to both the internal and external customers are simple.

> At an internal level it simply means that we treat everyone with respect, kindness, patience, and consideration. Our diversity must continue to be one of our greatest strengths. On the external level, we respond quickly, skillfully, and most important, positively to every customer need. (PFD, 2001, p. 3)

The protocol states to accomplish the PFD goal of providing a quality customer service requires leadership, commitment, planning, practice, creativity, smart application, networking, and continual refinement.

In a discussion with Donald Cox, Fire Chief of West Des Moines (IA) Fire Department, about the difficulty of finding fire departments that actually have a quality assurance program, Chief Cox suggested researching fire departments that have gone through the process to become internationally accredited. The accreditation process requires a department to perform a self-evaluation and meet set standards. A manual by The Commission on Fire Accreditation International, Inc. (CFAI) (2000) provided evaluation information of key elements pertaining to developing and maintaining a quality fire service. The components evaluated are:

1) Governance and Administration
2) Assessment and Planning
3) Goals and Objectives
4) Finance Resources
5) Programs

6) Physical Resources

7) Human Resources

8) Training and Competency

9) Essential Resources

10) External Systems Relations (Commission on Fire Accreditation International, 2000, p. 12)

The importance the CFAI places on quality improvement and a continuous self assessment is illustrated in the organization's mission statement.

> The commission on Fire Accreditation International, Inc. is dedicated to assisting the fire and emergency service agencies throughout the world in achieving excellence through self assessment and accreditation in order to provide continuous quality improvement and the enhancement of service delivery to their communities. (Commission on Fire Accreditation International, 2000, p. 2)

The CFAI advocates quality in the fire service and listed the purposes for an agency to seek accreditation.

1). Fostering excellence in fire service agencies through the development of criteria and guidelines for assessing organizational effectiveness.

2) Encouraging improvement of agency endeavors through continuous self-study and evaluation.

3) Assuring the agency, the general public, and other agencies or organizations that the agency has clearly defined and appropriate goals and objectives; has established conditions under which their achievement can reasonably be expected; appears, in

fact, to be accomplishing them substantially; and is so organized, staffed, and supported that it can be expected to continue to do so.

4) Providing council and assistance to establish and developing agencies.
5) Protecting agencies against encroachments, which might jeopardize their effectiveness or efficiency. (Commission on Fire Accreditation International, 2000, p.14)

According to the CFAI, performing the self-assessment process, the department may determine if the organization is effective, establish better-defined goals and objectives, and determine the reasons for the success of the organization. Other benefits may include, promotion of excellence, encourage quality assurance and quality improvement, provide a detailed evaluation of the department and services, identify strengths and weaknesses, develop a system for addressing deficiencies and professional growth, improve communication, and foster pride within an organization.

In summarizing, the literature review supported information gathered through surveys of fire departments across the nation, and also provided the added information on how to structure the program, components to review, regularity of reviews, identification of committee members, and expected benefits. Enough information was gathered to develop a QA plan for the OFD.

PROCEDURES

The desired outcome of this research was to evaluate the usefulness of a fire quality assurance program (QA) and if such a program would benefit the Odessa Fire Department. If a program seemed to be feasible and beneficial, a plan for implementing a QA program would be developed. Two surveys were conducted of fire departments across the nation with no other

selection criteria other than the department's accreditation status and geographic location. The surveys were to help evaluate the value and support the fire service placed on such a program, to identify potential benefits for the program, to discover what components were evaluated, and to identify the usual participants of a QA committee. The first survey was given to non-accredited departments across the nation to determine how common a QA program is and how survey participants would view such a program. The second survey was also sent to different departments across the nation, but this time, departments that are accredited by the Commission on Fire Accreditation International (CFAI) were purposely selected due to the self-assessment requirements of the Commission. The survey for accredited departments contained some of the same questions as the first, but included specific response evaluation questions. The departments were asked what components of the fire service should be evaluated, how often, and the general make up of the evaluation committee. Again, the departments were selected by geographical location and status as an international accredited fire service. A sample of the first survey of non-accredited departments is included as Appendix A, and the results of the survey, including a list of participating departments, can be found in Appendix B. A sample of the second survey of accredited departments is included as Appendix C, and the results and a list of the participating departments are included as Appendix D.

A literature review was conducted to obtain information from fire departments and organizations out-side the fire service that have knowledge and experience with a QA program. The literature was studied in an effort to gain enough information to determine if such a program would be productive and if so, develop a plan for participation. The Largo (FL) Fire Rescue (LFR) Department, a participant in the survey of accredited departments, sent a copy of the customer survey card used by the LFR for EMS responses (Appendix G) and the customer

service card for a fire response (Appendix H). A copy of the Odessa Fire Department's customer service card is included as Appendix E. The limitations of the surveys was that only accredited departments had a formal QA process, and this process was to meet the standards set by the CFAI, therefore not allowing a comparison for independent QA programs.

POPULATION

The survey conducted with non-accredited departments (Appendix A) was distributed to 22 departments across the nation with a return of 100%. The survey of accredited departments was sent to 30 departments across the nation (Appendix C) with a 50% return. Both surveys provided information necessary to determine the interest, support, components, and expected benefits of establishing a QA program. All participants of the survey, regardless of accreditation status, agreed 100% that a fire service QA program would be of benefit in recognizing the strengths and weaknesses of the fire service.

The population of the cities surveyed ranged from 10,000 to 1.8 million, with an average population of 320,700. The departments were 69.5% paid, 3.0% volunteer, and 28.5% combination with an average of 230 members. The smallest department reported 12 members and the largest reported 3,345. There were a total of 52 departments surveyed, 22 non-accredited and 30 accredited. Though 100% of the departments support a quality assurance program, only 30% of the non-accredited departments actually participate in one, while 73.5% of the accredited departments participate in a formal, QA program. The Fire and Emergency Services, U.S. Naval Air Station, Keflavik, Iceland reported the smallest service area of 22.5 acres, and the largest service area was reported by the Houston (TX) Fire Department as 617 square miles. The non-accredited fire departments that responded to the survey were from; Lynchburg, VA - Prince

William, VA - National City, CA - Holden, Maine – Dallas/Ft. Worth Airport, TX – Tampa, FL – Canby, OR – Yuma, AZ – Fort Meyers, FL – Palm Harbor, FL – Eau Claire, WI – Saint Augustine, FL – Pacific Grove, CA - Lincoln, AR – Winter Park, FL – Imperial Beach, CA – Roseburg, OR – Valley, AL – Oak Park, IL – Bismarck, ND – Brush Prairie, WA – Miami, OK. The participating, internationally accredited, fire departments that were surveyed are from; Austin, TX – Aurora, CO – Burnsville, MN – Chandler, AZ – Charlotte, NC – Greensboro, NC – Henrico County, VA, - Houston, TX – Howard County, MD – Key Biscayne, FL – Largo, FL – Keflavik, Iceland – Oak Park, IL – Plano, TX – and Southlake, TX.

LIMITATIONS

Limitations of evaluating the usefulness of a quality assurance program for the fire service are that not many departments have a formal QA process. Some departments send out customer service cards, and consider that as a quality as a QA program. The departments that do maintain a formal QA program are internationally accredited. The QA or self-assessment process is based on the same requirements set by the Commission on Fire Accreditation International, Inc., therefore limiting options for comparison. Departments that were not accredited were in favor of such a program, but had not implemented one, which did not allow for research comparison of a totally independent, QA process.

Another limitation for this research was that few research papers exists in the National Fire Academy Learning Resource Center on a fire service quality assurance program. The papers that were found did not address the specific information for establishing a formal QA process.

The interest demonstrated by the surveyed departments and literature review indicates QA program could be and should be as common and as formal as programs established in the

EMS. As many departments strive to change and enhance services, seek alternative funding, or simply gather information, the QA program may prove to be a viable resource in this quest.

RESULTS

The results of the literature review and surveys helped to answer the research questions and evaluate the advantages of a QA program. The results of the research are as follows:

Research Question # 1

What is a quality assurance (QA) program?

Answer: A quality assurance program is a formal process to evaluate a service and promote quality and to conduct a retrospective review or inspection of services or processes that is intended to identify problems, weaknesses and strengths, and to reach set goals and objectives.

Two separate, nationwide surveys were conducted. One survey was given to non-accredited fire departments and a second survey was sent to accredited fire departments to determine if other departments participate in a QA program, and if so, what would be considered the benefit for the fire service. While 100% of the returned surveys indicated a QA program would enhance the quality of the fire service, only 30% of the non-accredited departments actually participate in one, but the accredited departments reported 73.5% participate in a formal, QA program.

Research Question #2

What components are evaluated by a quality assurance program by other fire departments?

Answer: The Commission on Fire Accreditation International provided a comprehensive

list of components for self-assessment, quality assurance programs for accredited departments. Surveyed accredited departments also mentioned these components as important to delivering a quality service. The components are:

1) Governance and Administration
2) Assessment and Planning
3) Goals and Objectives
4) Finance Resources
5) Programs
6) Physical Resources
7) Human Resources
8) Training and Competency
9) Essential Resources
10) Human Resource Development and Management (Commission on Fire Accreditation International, 2000, p. 12)

The Baldrige Program identifies the following seven key action areas or categories to evaluate for EMS, but could also apply to the fire service.

- **Leadership** involves efforts by senior leadership and management leading by example to integrate quality improvement into the strategic planning process and throughout the entire organization and to promote quality values and QI techniques in work practices.
- **Information & Analysis** concerns managing and using the data needed for effective QI. Since quality improvement is based on management by fact, information and analyses are critical to QI success.

- **Strategic Quality Planning** involves three major components: 1) developing long and short term organizational objectives for structural, performance and outcome quality standards; 2) identifying ways to achieve those objectives, and 3) measuring the effectiveness of the system in achieving quality standards. principle that the entire EMS (fire) workforce is motivated to achieve new levels of service and value.
- **EMS (fire) Process Management** concerns the creation and maintenance of high quality services. Within the context of quality improvement, process management refers to the improvement of work activities and workflow across functional or department boundaries.
- **EMS (fire) System Results** entails assessing the quality results achieved and examining the organization's success at achieving quality improvement.
- **Satisfaction of Patients and Other Stakeholders** involves ensuring ongoing satisfaction by those internal and external to the EMS (fire) system with the services provided. (NHTSA, 1997, P. 6)

Of the surveyed departments that were not accredited 65% limit the QA process to customer service cards. While 7% also review post incident analysis, 2% perform training class and instructor evaluations, and 2% reported evaluating dollar loss, injuries, and state of readiness. Critiquing response times and company evolutions were not specifically mentioned, but seemed to be a common practice among accredited departments, as the survey indicated 100% review response times.

Research Question # 3

What are the benefits of a quality assurance program for the Odessa Fire Department?

Answer: The Phoenix (AZ) Fire Department (2001), listed the benefits of focusing on quality as the organization benefiting by providing exceptional customer service, and listed other potential benefits as:

- Builds positive relationships and trust within our fire department
- Builds positive relationships and trust in our community
- Secures and maintains adequate resources and benefits
- Happy customers, bosses, workers.
- Positive job satisfaction
- Places us in the best position to compete
- It's fun to be nice and do nice things
- Doing it right eliminates bad press, liability, and extra paperwork
- It saves lives and property – that's important to our customers
- It's the right thing to do (Phoenix Fire Department, 2001 p.3)

According to the Commission on Fire Accreditation International, Inc. (CFAI), conducting a self-assessment process or QA program, the benefits that should be realized by the Odessa Fire Department may include, the organization becoming more effective, helping to establish better-defined goals and objectives, and assist with determining the reasons for the success of the organization. Other benefits may include, promotion of excellence, encourage quality assurance and quality improvement, provide a detailed evaluation of the department and services, identify strengths and weaknesses, develop a system for addressing deficiencies and professional growth, improve communication, and foster pride within the OFD.

Research Question # 4

If the Odessa Fire Department implements a quality assurance program, how should the program be structured?

Answer: According to the survey results of accredited departments, the structure of similar QA programs include chief officers 100%, fire officers are included 86.5%, firefighters are included 47%, dispatchers are included 13.5%, outside agencies are included 20%, and other fire departments are included 7% of the time on an evaluation committee. The program should be structured to meet the objectives of the OFD. A committee consisting of at least 1 chief officer, 2 fire officers, 2 firefighters, 2 paramedics, 1 dispatcher and 1 dispatch supervisor should be capable of conducting an effective, well rounded, organizational review. The survey revealed that 80% of the QA committees meet monthly, 33.5% meet quarterly, 26.5% meet weekly, 26.5% meet annually, and 7% meet bi-annually. The OFD Fire QA Committee, if established, will meet on the first Wednesday of each month.

Non-accredited Fire Department Survey Results

The non-accredited fire department surveys were given to various departments across the nation to determine if a quality assurance program was being used to evaluate the fire service, how many participate, and if not currently participating, how much interest exists in a fire service QA program. Twenty-two surveys were distributed to students of the Executive Leadership Class of the National Fire Academy with a return of 100%. To determine the size of the department, the number of members was requested. The smallest department had 12 members and the largest maintained 1000 members, with an average of 176 members of the surveyed departments. The survey asked if the department is paid, volunteer, or combination. The results indicated 51% of the departments were paid, 47.5% were combination, and 2% were volunteer departments. EMS is also provided by 88.5% of the surveyed departments. Of the

departments that provide EMS, 70% indicated an EMS quality assurance program is in place, while only 30% have established a fire QA program, and 70% have no fire QA program. Of the 22 departments surveyed, 100% indicated an interest in a fire QA program. The departments that use citizen survey cards to allow for citizen feedback was 65%, and 57% offers an employee feedback program. Departments that provided additional information, indicated that 7% conduct post incident analysis, and 2% routinely conduct instructor evaluations, dollar loss, fire fighter and civilian injuries, completion of objectives, and the department's state of readiness.

The average population of the cities of both surveys was 320,700. The smallest city had a population of 10,000 and the largest had a population of 1.8 million. A copy of the survey for non-accredited departments is included as Appendix A, and the results of the survey and participating departments are illustrated in Appendix B.

Internationally Accredited Departments Survey Results

A survey of 30 internationally accredited departments resulted with a 50% return. The survey is included as Appendix C, and the results and a list of surveyed departments can be found in Appendix D. The survey of the accredited departments indicated an average of 553 members, an average population of 320,700, and an average service area of 142.0 square miles. The department with the least amount of members had 30, with the largest maintaining 3,345. The smallest service area is 22.5 "acres" with the largest area covered reported as 617.0 square miles. The departments were 93% paid and 7% combination. Coincidently, no departments surveyed were a volunteer service. EMS is provided by 86.5% of the departments, all of which have an EMS quality assurance program. A fire quality assurance program is routinely conducted by 73.5% of the accredited departments, but 100% indicated a QA program is needed in the fire service. Customer service cards are used by 85.5% and 53.5% provide an employee feedback

program. Call handling and response times are evaluated by 100% of the departments, with 93% tracking out of station time after the alarm has been received. Fire knock down time is evaluated by 33.75% and 33.5% measure time of applying water. On scene time for fire equipment is reviewed by 73.5% and patient extrication is reviewed by 33.75% of the departments. The most common interval for the QA committee to meet is monthly (80%), quarterly and annual meetings are conducted by 33.5%, weekly 26.5%, and 7% perform bi-annual reviews. The survey revealed that the committee is made up of chief officers 100% of the time, 86.5% include fire officers, 47% include firefighters, 13.5% include dispatchers, 20% include outside agencies (accreditation commission), and only 7% include other fire department representatives. Benefits listed by participating departments for conducting a quality assurance program included; resolving response issues, reallocation of resources, improved communications, improved response times, validation of work well done, allows for continued improvement, justified acquiring addition equipment and personnel, better data management, identified strengths, weaknesses and trends, helped with planning and resource placement, accountability, and the formal process to conduct a quality assurance review.

The information gained through the literature review and surveys assisted the Odessa Fire Department with developing a plan to implement a fire service QA program. A copy of the plan is included as Appendix F.

DISCUSSION

The Odessa Fire Department has been very innovative, especially in the past six years. Part of the innovations can be attributed to the management staff participation in the EFOP of the NFA, but the remaining credit belongs to the administration’s vision of more efficient and safer methods of providing a continued quality service.

This innovative thinking resulted in a total reorganization of the department in 1996. The OFD went from three men, basic life support engines to four men, advanced life support engines. An innovative decision to participate in a leasing program resulted in replacing worn out fire apparatus and ambulances with new equipment, and reducing the engines replacement schedule from 20 years to eight, and the ambulance replacement from 10 years to 6. The OFD changes have proven very successful. A quality assurance program could generate more ideas and result in more progressive, innovative changes, while insuring quality is not over looked.

An important part of this research was to define a quality assurance program. The U.S. Department of Transportation, National Highway Traffic Safety Administration (NHTSA) (1997), defines a quality assurance program as a retrospective review of services intended to identify problems, promote quality, and along with a quality improvement program, to promote a continuous study and improvement of a process, system or organization. Powers (1992) defined quality as a dynamic process and the goal is to meet established standards and ultimately, elevate the standards or expectations to a higher level. In the same article, co-author, Taigman (1992), stated how difficult it is to define quality since it depends on an individual's own opinion, and concluded, "quality is determined when your perception matches your expectation." Eastman and Walz (1992), defined a similar QA program, total quality management (TQM), as one that focuses on designing and improving the process so that mistakes are prevented.

With a good understanding of the definition of a QA program and how it could be adapted to the OFD, research was conducted to determine what benefits could be expected. The Phoenix (AZ) Fire Department (2001), listed benefits of focusing on quality as building positive relationships, and securing and maintaining adequate resources and benefits, resulting in a happier work place and being better prepared to save lives and property. According to the

Commission on Fire Accreditation International, Inc., (CFAI) (2000), performing the self-assessment process, a basic principle of a QA program, will result with the department becoming more effective and help with establishing better defined goals and objectives, determining the reasons for the success of an organization while promoting excellence and encouraging quality assurance and quality improvement. Benefits listed by surveyed, accredited fire departments, with longevity and experience of such a program, included; resolving response issues, reallocation of resources, improved communications, improved response times, validation of work well done, allows for continued improvement, justification of acquiring addition equipment and personnel, better data management, identification of strengths, weaknesses and trends, assisting with planning and resource placement, accountability, and provides a formal process to conduct a quality assurance review.

Along with considering the benefits of a QA program, an organization should consider the expectations of the community served. Brenner (1998) wrote the fire service of today is expected to provide more for less. Dean (1992) also wrote about diminishing tax dollars and the expectation of the taxpayers to have a quality product or service in return for their dollar. Dean's research included a statement from an article by Burton A. Clark, Chief Fire Executive, (June, 1986) which stated; "There are three groups that determine the standards of effectiveness and efficiency for the fire service. The general public, the government, and the fire service itself…. Dean recommended as a result of research conducted, that there are sufficient reasons to believe that a quality assurance program is not only warranted but also necessary for the fire service.

With an understanding of the benefits of a quality assurance program and the public's expectations, the steps of implementing such a program should be considered. Brenner recommended training everyone in the organization for service quality, collaborating with

associations or labor unions, conducting a quality deficiency survey a minimum of once a year, and if surveying a large group of people, breaking them into small divisions with no more than fifty individuals in one division. Brenner added that quality deficiencies anywhere in an organization could create a negative impact on the organization's work products and/or services. To assist with this evaluation, Timmins, (1985) provided a "mnemonic device" to organize a QA program with using each letter of the word "Evaluation". Timmins offered the following; **E** - evaluating results, **V** - values (goals) enunciated, **A** - accomplishments carefully assessed, **L** - leadership should be assessed and evaluated, **U** - unforeseen events or incidents recognized, **A** - assessment of the measuring tools, **T** - test the validity of the results, **I** - include recommendations for future action, **O** - organizational behavior should be noted and analyzed, **N** - norms and values should be incorporated.

Brenner's recommendation of training everyone in the organization indicates the training division of a department needs to be involved. Weaknesses of an organization will be discovered and training issues will be identified. Walker (1994) suggested eight general areas that a training division can help build an integrated quality management system and included; management and leadership, strategic planning, customer focus, training recognition, associate empowerment, measurement and analysis, quality assurance, and quality and productivity improvement results.

Along with training considerations, the components to be reviewed should be decided. The components for evaluation can be borrowed from the CFAI (2000), which include governance and administration, assessment and planning, goals and objectives, finance resources, programs, physical resources, human resources, training and competency, essential resources, and external systems relations. Evaluating these components and the response data routinely reviewed by accredited departments should provide a thorough, comprehensive study

of the organization. The survey indicated that 80% of departments that conduct a QA review do so on a monthly basis.

The results of this research of a QA program allowed the OFD the information needed to evaluate the value of a program, as well as what steps should be taken during implementation. The literature review supported information discovered during the survey process, which included components to be evaluated, the participating personnel, as well as the most common evaluation schedule of monthly reviews. The surveys also revealed that departments that are not held to some form of accountability such as required by the Commission on Fire Accreditation International, Inc., does not have an organized, formal, Q.A. process in place. As suggested by Dean (1992) and Brenner (1998), taxpayers expect departments to be more efficient and still provide a quality service. With this in mind, the OFD developed a plan to establish a QA committee (Appendix F).

RECOMMENDATIONS

The data collected through both surveys and the information gained through the literature review supports the concept of establishing a quality assurance program. The literature review contained in this research paper provided the information necessary to write a plan for an organized QA program and was supported by similar information gathered through both fire service surveys. Benefits and success enjoyed by fire departments that conduct a self-assessment, QA program, provided the necessary incentive and framework to establish a plan for the implementation of a QA program for the OFD. The OFD is committed to being a progressive and innovative department as was recently demonstrated by the hard work and extra effort required to raise the department's Insurance Service Organization (ISO) rating from a 4 to a 2.

After researching the nationally accredited fire departments, the OFD will strive to become accredited and be associated with what is considered the nation's elite departments. A formal QA program will no doubt prove useful in obtaining this goal. During this study, this researcher spoke with an accredited department representative that said the department's self-assessment provided information to support and justify acquiring more equipment, adding and relocating fire stations, and hiring additional personnel. Fire administrators may often realize these needs, but lack the process or supporting documentation to convince City and County officials to commit the necessary funds. A formal department and community evaluation such as is afforded through a quality assurance program, can provide the departments with an opportunity to meet or exceed the expectations of the community, as well as know what those expectations are. The idea for this research for a quality assurance program came from participation in the Executive Fire Officers Program (EFOP) of the National Fire Academy (NFA). During a search in the NFA Learning Resource Center, this researcher found very little information from past EFOP papers on this particular topic. This was surprising since two external surveys conducted by this researcher of fire departments across the nation indicated 100% believed such a program has value to the fire service.

The recommendation of this author is for fire departments to establish an organized method of self-evaluation through a quality assurance program, and to do so before it's mandated by federal, state, or local regulatory agencies, as is the case for EMS providers. The trial and error method of operation does not make since and could prove to be a dangerous, expensive, and a time consuming approach to providing services. A new, innovative approach to providing an efficient and quality service will no doubt encourage positive change within the fire service.

As a result, the fire service will need a formal QA process to help evaluate what is needed to meet these challenges, and to actually understand what the challenges are.

Dean (1992), Brenner (1998), the CFAI (2000), and the Phoenix (AZ) Fire Department (2001) support an organized quality assurance effort and agree such a program would be beneficial to the fire service and each provided information as to the value of the program or how the program should be structured. Guidelines furnished in the writings of the CFAI as well as survey information all provided necessary and useful procedural information with establishing a plan for implementing a QA program for the OFD.

The purpose of this research was to determine to what degree would a QA program benefit the OFD. The research revealed that such a program offers an opportunity to establish a formal self-assessment process, provided the programs framework, as well as anticipated benefits. The problem of the OFD of not having a quality assurance program for the fire suppression division was resolved by this research and the development of a plan to implement a formal QA program (Appendix F).

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Appendix A

Fire Service Quality Assurance Program
Charlie Smith, Assistant Chief
Executive Leadership Class
Non-Accredited Fire Department
Research Survey

This survey is being conducted as part of a research project for the Executive Fire Officers Program of the National Fire Academy. The information provided by this survey will be included in a research paper that will be presented to the National Fire Academy. The Odessa Fire Department will also consider this information if a Fire Service Quality Assurance Program is implemented. Thank you for your prompt answering of the following questions and returning the survey to:

Assistant Chief, Charlie Smith
Odessa Fire Department
P.O. Box 4398
Odessa, Texas 79760

Phone # (915) 335-4654
Fax # (915) 335-4664
E-mail – csmith@ci.odessa.tx.us

1. Name of your department:_____

2. Number of members of your department:_____

Please Circle or place an "X" by the Appropriate Response

3. Is your department: **Paid** **Volunteer** **Combination**

4. Does your department provide EMS services? **Yes** **No**

5. If your department provides EMS, do you have a quality assurance program for reviewing your EMS services? **Yes** **No**

6. Do you conduct a quality assurance program for your departments ***fire*** services? **Yes** **No**

7. Do you believe a quality assurance program would be beneficial in recognizing the strengths and areas needing improvement for the ***fire*** service? **Yes** **No**

8. Does your department use a method such as citizen survey cards, to allow citizens input of their perception on how well you provide ***fire*** services? **Yes** **No**

9. Do you provide a method of receiving feedback from your employees on their perception of how well your department delivers fire services? **Yes** **No**

Comments:_____

_____

_____

Thank you for your time and participation.

Appendix B

Fire Service Quality Assurance Program
Charlie Smith, Assistant Chief
Executive Leadership Class
Non-accredited Fire Departments
Research Survey Results

This survey is being conducted as part of a research project for the Executive Fire Officers Program of the National Fire Academy. The information provided by this survey will be included in a research paper that will be presented to the National Fire Academy. The Odessa Fire Department will also consider this information if a Fire Service Quality Assurance Program is implemented. Thank you for your prompt answering of the following questions and returning the survey to:

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Odessa Fire Department
P.O. Box 4398
Odessa, Texas 79760

Phone # (915) 335-4654
Fax # (915) 335-4664
E-mail – csmith@ci.odessa.tx.us

1. Name of your department:_____

2. Number of members of your department: _____**average number of members = 176**_____

Please Circle or place an "X" by the Appropriate Response

3. Is your department: **51% = Paid** **2% = Volunteer** **47.5% = Combination**

4. Does your department provide EMS services? **88.5% = Yes** **12.5% = No**

5. If your department provides EMS, do you have a quality assurance program for reviewing your EMS services? **70% = Yes** **23% = No** **N/A = 7%**

6. Do you conduct a quality assurance program for your departments ***fire*** services? **30% = Yes** **70% = No**

7. Do you believe a quality assurance program would be beneficial in recognizing the strengths and areas needing improvement for the ***fire*** service? **Yes** **100% = No**

8. Does your department use a method such as citizen survey cards, to allow citizens input of their perception on how well you provide ***fire*** services? **65% = Yes** **35% = No**

9. Do you provide a method of receiving feedback from your employees on their perception of how well your department delivers fire services? **57% = Yes** **43% = No**

A total of 22 departments were surveyed which resulted in a 100% return. The non-accredited fire departments that were surveyed are from; Lynchburg, VA - Prince William, VA - National City, CA - Holden, Maine – Dallas/Ft. Worth Airport, TX – Tampa, FL – Canby, OR – Yuma, AZ – Fort Meyers, FL – Palm Harbor, FL – Eau Claire, WI – Saint Augustine, FL – Pacific Grove, CA - Lincoln, AR – Winter Park, FL – Imperial Beach, CA – Roseburg, OR – Valley, AL – Oak Park, IL – Bismarck, ND – Brush Prairie, WA – Miami, OK.

Appendix C

Fire Service Quality Assurance Program
Charlie Smith, Assistant Chief
Executive Leadership Class
Research Survey
Accredited Fire Departments

This survey is being conducted as part of a research project for the Executive Fire Officers Program of the National Fire Academy. The information provided by this survey will be included in a research paper that will be presented to the National Fire Academy. The Odessa Fire Department will also consider this information if a Fire Service Quality Assurance Program is implemented. Thank you for your prompt answering of the following questions and returning the survey to:

Assistant Chief, Charlie Smith
Odessa Fire Department
P.O. Box 4398
Odessa, Texas 79760

Phone # (915) 335-4654
Fax # (915) 335-4664
E-mail – csmith@ci.odessa.tx.us

1. Name of your department:_____

2. Number of members of your department:_____

3. Population of your service area? _____

4. Size of service area? _____

Please Circle or place an "X" by the Appropriate Response

5. Is your Department accredited with The Commission on Fire Accreditation International?
YES **No**

6. Is your department: **Paid** **Volunteer** **Combination**

7. Does your department provide EMS services? **Yes** **No**

8. If your department provides EMS, do you have a quality assurance program for reviewing your EMS services? **Yes** **No**

9. Do you conduct a quality assurance program for your departments ***fire*** services?
Yes **No**

10. Do you believe a quality assurance program would be beneficial in recognizing the strengths and areas needing improvement for the ***fire*** service?
Yes **No**

11. Does your department use a method such as citizen survey cards, to allow citizens input of their perception on how well you provide ***fire*** services?
Yes **No**

12. Do you provide a method of receiving feedback from your employees on their perception of how well your department delivers ***fire*** services?
Yes **No**

13. Do you measure and evaluate the time it takes for the call handler and/or dispatcher to receive the information and actually dispatch the units?
Yes **No**

14. Do you evaluate if the correct units are being dispatched with accurate information?
Yes **No**

15. Do you measure and evaluate on a regular basis, the time for units to receive the alarm from dispatch and actually go in route? **Yes** **No**

16. Do you measure and evaluate response times on a regular basis? **Yes** **No**

17. Do you measure fire "knock down" time on a regular basis? **Yes** **No**

18. Do you measure the time it takes to apply water on a fire on a regular basis?
Yes **No**

19. Do you measure on-scene times for fire units on a regular basis? **Yes** **No**

20. Do you measure extrication times on a regular basis? **Yes** **No**

21. How often do you measure and evaluate the above, mentioned segments of a fire response?
Weekly **Monthly** **Quarterly**

Annually **Other** (please explain)_____

22. What other activities are reviewed and evaluated on a regular basis, which pertain to the service you provide? _____
_____

23. If you have an evaluation process, who participates in the review? (please circle all that apply)

Chief Officers **Fire Officers** **Firefighters** **Dispatchers**

Private Citizens **Outside agencies** **Members of other fire department**

24. What benefits, if any, has your department realized by conducting a review of the services you provide?
_____

_____

_____

Comments:_____

_____

_____

Thank you for your time, participation and rapid response.

Appendix D

Fire Service Quality Assurance Program
Charlie Smith, Assistant Chief
Executive Leadership Class
Research Survey
Accredited Fire Departments
Results

This survey is being conducted as part of a research project for the Executive Fire Officers Program of the National Fire Academy. The information provided by this survey will be included in a research paper that will be presented to the National Fire Academy. The Odessa Fire Department will also consider this information if a Fire Service Quality Assurance Program is implemented. Thank you for your prompt answering of the following questions and returning the survey to:

Assistant Chief, Charlie Smith
Odessa Fire Department
P.O. Box 4398
Odessa, Texas 79760

Phone # (915) 335-4654
Fax # (915) 335-4664
E-mail – csmith@ci.odessa.tx.us

1. Name of your department:_____

2. Number of members of your department: **553 members average**_____

3. Population of your service area? _____**320,700 average population**_____

4. Size of service area? _____**142.0 Sq. miles average**_____

Please Circle or place an "X" by the Appropriate Response

5. Is your Department accredited with The Commission on Fire Accreditation International?
100% = YES **0% = No**

6. Is your department: **93% = Paid** **0% = Volunteer** **7% = Combination**

7. Does your department provide EMS services? **86.5% = Yes** **13.5% = No**

8. If your department provides EMS, do you have a quality assurance program for reviewing your EMS services? **86.5% = Yes** **13.5% = No**

9. Do you conduct a quality assurance program for your departments ***fire*** services?
73.5% = Yes **26.5% = No**

10. Do you believe a quality assurance program would be beneficial in recognizing the strengths and areas needing improvement for the ***fire*** service?
100% = Yes **0% = No**

11. Does your department use a method such as citizen survey cards, to allow citizens input of their perception on how well you provide ***fire*** services?
86.5% =Yes **13.5% = No**

12. Do you provide a method of receiving feedback from your employees on their perception of how well your department delivers ***fire*** services?
53.5% = Yes **46.5% = No**

13. Do you measure and evaluate the time it takes for the call handler and/or dispatcher to receive the information and actually dispatch the units?
100% = Yes **0% = No**

14. Do you evaluate if the correct units are being dispatched with accurate information?
93% = Yes **7% = No**

15. Do you measure and evaluate on a regular basis, the time for units to receive the alarm from dispatch and actually go in route? **93% = Yes** **7% = No**

16. Do you measure and evaluate response times on a regular basis? **100% = Yes** **0% = No**

17. Do you measure fire "knock down" time on a regular basis? **33.74% = Yes** **66.25% = No**

18. Do you measure the time it takes to apply water on a fire on a regular basis?
33.5% = Yes **66.5% = No**

19. Do you measure on-scene times for fire units on a regular basis? **73.5% = Yes** **26.5% = No**

20. Do you measure extrication times on a regular basis? **33.75% = Yes** **66.25% = No**

21. How often do you measure and evaluate the above, mentioned segments of a fire response?
7% = Weekly **80% = Monthly** **33.5% = Quarterly**

26.5% = Annually **Other** (please explain)__**7% = Biannually**_____

22. What other activities are reviewed and evaluated on a regular basis, which pertain to the service you provide? _**annual inspections – training hours – time off (vacation & sick leave) – company evolutions – assessment plans – hydrant testing – quality of public education programs – call types – haz-mat and confined space competency & qualifications – residential fire safety & exit drills- time to patients side – compare response times between one shift to another – and risk factors.**_____

23. If you have an evaluation process, who participates in the review? (please circle all that apply)

100% = Chief Officers **86.5% = Fire Officers** **47% = Firefighters** **13.5% = Dispatchers**

0% = Private Citizens **20% = Outside agencies** **7% = Members of other fire department**

24. What benefits, if any, has your department realized by conducting a review of the services you provide?
__**resolved response issues – reallocation of resources – improved communications – improve response times – validation of work well done – allows for continued quality improvement – justification of additional equipment & personnel – good data to better manage – identify strengths, weaknesses, & trends – assists with planning & resource placement – accountability, and provides a formal guide or process.**_____

A total of 30 departments were surveyed which resulted in a 50% return. The participating, internationally accredited, fire departments that responded to the survey are from; Austin, TX – Aurora, CO – Burnsville, MN – Chandler, AZ – Charlotte, NC – Greensboro, NC – Henrico County, VA, - Houston, TX – Howard County, MD – Key Biscayne, FL – Largo, FL – Keflavik, Iceland – Oak Park, IL – Plano, TX – and Southlake, TX.

Departments that were sent a survey but did not respond were from: Bellevue, Washington – Calgary, Alberta Canada – Cary, North Carolina – Coral Gables, Florida – Countryside, Illinois - Fayettte County, Georgia – Henderson, Nevada – Honolulu, Hawaii –Kingsport, Tennessee – Kitsap County, Washington – Lincoln, Nebraska - Menasha, Wisconsin – Naperville, Illiinois – Nashville, Tennessee – Tualatin Valley, Oregon**.**

Appendix E

City of Odessa Fire Department
Customer Service Survey

It is our goal and main objective to meet or exceed the expectations of the citizens of Odessa and Ector County. We need and value your input, and in an effort to continue to improve our service, we are asking you to complete the following survey:

	Fire	Code Enforcement
What type of service did we provide?	___Fire ___Ambulance	___Inspection
Did our units arrive in a timely manner?	___Yes	___No
Was our staff courteous and professional?	___Yes	___No
Were you pleased with the service our staff provided?	___Yes	___No
On a scale of 1 to 5, with 1 being poor and 5 excellent, how would you rate our service? (please circle)	1 2 3 4 5	

We encourage and welcome your comments. Thank you.

Please return the completed survey to:
Odessa Fire Department
P.O. Box 4398
Odessa, Texas 79760

No Postage Necessary
Postage Prepaid

Place in any mailbox

Appendix F

Fire Department
Standard Operating Guidelines

NAME / SUBJECT OF GUIDELINE	GUIDELINE NUMBER	REVISED ON
	200.35	01/13/2003

Fire Services Q.A Plan "DRAFT"

SECTION
0200 - Fire

PURPOSE:

To inform all personnel of the roles, responsibilities, and expectations of a Quality Assurance Committee for fire services provided including fire, haz-mat, and fire inspection.

Roles and Responsibilities:

The Committee shall review documentation pertaining to all structure fires, hazmat responses which shall include the fire and dispatch report. A post incident analysis form shall be completed on each incident. The Committee review specific elements of the incident. These elements are;

Fire Response Evaluation Components:

- Call handling time
- Out of station time from time of alarm to units en route
- Travel time
- On scene time
- Time for units to go back in service
- Time for on inspectors to arrive after initial call up
- Appropriate units dispatched
- Appropriate information obtained from caller and provided to responding units
- Suppression tactics to include:
  - ~ Ventilation
  - ~ Water supply
  - ~ Water application
  - ~ Established RIT team
  - ~ Fire knock down time
  - ~ Time to complete primary search
  - ~ Time to complete secondary search

- ~ Time of extinguishments
- ~ Proper utilization of resources
- ~ Adhering to department protocols
- ~ Utilities managed properly and utility company notifications made
- ~ Assistance provided to occupants
- ~ Other components as identified by the Committee

Fire Inspection Evaluation Components:

- Fire inspection report for proper documentation
- Review ignition sources to identify fire setting trends
- Review suspected ignition sources
- Review for fire types, ex: structure (residential or commercial), vehicle, trash, grass, etc.
- Address fire history (how many fires at this location in past year?)
- Suspicious fires
- Number of "undetermined" as listed for cause of fire
- Time of inspectors arrival at scene after initial notification to respond
- Other significant information as determined by the committee.

Haz-mat Responses Evaluation Components:

- Review haz-mat reports for proper documentation
- Adhering to department protocols
- Regulatory organizations notified (TNRCC – Railroad Commission
- Property owner notification
- Product owner notification
- Following proper Emergency Response Guidelines
- Safety precautions taken for responders and public to include:
  - ~ Proper information provided to responding units (direction to approach incident, wind speed and direction, product involved, scene size up, etc.)
  - ~ Proper protective clothing and equipment utilized
  - ~ Hot zone established
  - ~ Incident command, decon, staging, and rehab sites established in safe area
  - ~ Evacuations performed to safe area
  - ~ Victim assistance provided
  - ~ Scene stabilization (product removed, covered, etc.)
- Other significant information as determined by the Committee

Committee Members:

The Committee shall involve at least 1 Assistant Chief, 1 Suppression Battalion Chief, 1 Battalion Chief assigned to training, 1 Fire Captain, 1 Firefighter, 1 Paramedic, 1 Engineer, 1 Dispatcher, and 1 Dispatch supervisor.

Committee Meetings:

Committee meetings will be conducted the first Wednesday of each month in the Central Station classroom. The meetings shall begin at 9:30 a.m. and will be presided over by the highest-ranking officer in attendance. Meetings are open to all interested department members.

Committee Reports:

Minutes of the meeting shall be distributed to all members of the department. A report identifying strengths and improvement opportunities shall be presented to the Chief of the Department. The training division shall use the report as a tool for providing training direction. Positive feedback should be provided to those involved. Questionable actions should be investigated and addressed through the proper channels and most appropriate method of resolution.